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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,104	10/21/2004	John D. Jacobs	49301/HAC/P234	6845
23363	7590	01/24/2006	EXAMINER	
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			LEON, EDWIN A	
		ART UNIT	PAPER NUMBER	
			2833	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/512,104	JACOBS, JOHN D.	
	Examiner Edwin A. León	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 November 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2 and 7-30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 11-30 is/are allowed.
 6) Claim(s) 1 and 7 is/are rejected.
 7) Claim(s) 2 and 8-10 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 11/7/05.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed November 7, 2005 in which Claim 1 has been amended, Claims 3-6 have been cancelled and new Claims 29-30 have been added, has been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer et al. (U.S. Patent No. 4,245,875) in view of Stoner (U.S. Patent No. 4,865,558). With regard to Claims 1 and 7, Shaffer et al. (Figs. 1-5) discloses a multi-contact cartridge (14) removably insertable into an open-ended housing (16) of a connector moiety (12) in a selectively separable multi-function electrical connection of a multi-conductor cable (Fig. 4) between a tow vehicle and towed vehicle (Column 1, Lines 6-16), each conductor (Fig. 4) of the cable having a termination contact (22, 24) connected to it within the housing, comprising: a nonconductive body (52) having a first end and a second end and a plurality of openings (54, 58) extending from the first end

to the second end; an electrically conductive common contact member (64) having a female contact end (Fig. 4) and an opposite contact end (Fig. 4), wherein the female contact end is disposed in and the opposite contact end extends from a corresponding one of the plurality of openings, and wherein; a plurality of electrically conductive noncommon contact members (66) each having a female contact end (Fig. 4) and an opposite contact end (Fig. 4), wherein each female contact end is disposed in and each opposite contact end extends from a corresponding one of the plurality of openings in the body, the cartridge body being sized and arranged to be insertable into and securable within the connector moiety housing in a selected relation to the housing with each cartridge contact member in conductive engagement with a conductor termination contact (22, 24) at one end of the contact member and with the other end of the contact member disposed adjacent the open end of the housing.

However, Shaffer et al. doesn't show the female contact end has an outer diameter that is smaller than an inner diameter of the corresponding body opening in which it is disposed to allow for a lateral movement of the female contact end within the body, each female contact end comprises at least one longitudinal slot along at least a portion of its length to form a split sleeve, such that each female contact end comprises at least two moveable fingers, each female contact end comprises a spring that biases the at least two moveable fingers of each female contact end towards each other, each female contact end comprises a groove that receives a sealing element, such that the sealing element forms a seal between the female contact and the corresponding body opening in which the female contact is disposed.

Stoner (Fig. 4) discloses a similar connector (Fig. 4) having a female contact end (78) with an outer diameter (Fig. 4) that is smaller than an inner diameter (80) of the corresponding body opening (74) in which it is disposed to allow for a lateral movement of the female contact end within the body, each female contact end comprises at least one longitudinal slot (between 26) along at least a portion of its length to form a split sleeve (20), such that each female contact end comprises at least two moveable fingers (26), each female contact end comprises a spring (20) that biases the at least two moveable fingers of each female contact end towards each other, each female contact end comprises a groove (Fig. 4) that receives a sealing element (Fig. 4, in the back of 76), such that the sealing element forms a seal between the female contact and the corresponding body opening in which the female contact is disposed.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the cartridge of Shaffer et al. by including the female contact end having an outer diameter that is smaller than an inner diameter of the corresponding body opening in which it is disposed to allow for a lateral movement of the female contact end within the body, each female contact end comprises at least one longitudinal slot along at least a portion of its length to form a split sleeve, such that each female contact end comprises at least two moveable fingers, each female contact end comprises a spring that biases the at least two moveable fingers of each female contact end towards each other, each female contact end comprises a groove that receives a sealing element, such that the sealing element forms a seal between the female contact and the corresponding body opening in which the female contact is

disposed as taught in Stoner in order to minimize potential stubbing during the mating of the parts of the connector.

Allowable Subject Matter

4. Claims 11-30 are allowed for the reasons stated in the Office Action of July 28, 2005.

5. Claims 2 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The references fail to teach, disclose, or suggest, either alone or in combination, regarding Claim 2, the first end of the body forming a plug-type moiety in conformity with SAE J560 and wherein the second end of the body forms a socket-type moiety substantially in conformity with SAE J1560; regarding Claim 8, the second end of the body comprises a projection extending therefrom, and wherein the projection comprises a keying lug; regarding Claim 9, the body comprises a length having a front end portion adjacent to the first end of the body and a major portion extending from the front end portion of the body to the second end of the body, and wherein the front end portion has an outer diameter that is larger than an outer diameter of the major portion of the length; regarding Claim 10, the opposite contact end of the common contact member is a male contact and wherein the opposite contact ends of each of the noncommon contact members is a male contact and in combination with the rest of the limitations of the base and intermediate claims.

Response to Arguments

6. Applicant's arguments filed November 7, 2005 have been fully considered but they are not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to Applicant's arguments regarding Claim 1 that the Shaffer et al. reference doesn't show a cartridge, Applicant is reminded that, as cited in Applicant's own copies of the American Heritage, Merriam-Webster and Oxford English dictionaries, a cartridge is a modular unit to be inserted into a larger piece of equipment, a case or container which can be easily changed or a container designed for insertion into a mechanism. Therefore it is the Examiner's opinion that part (14) can be considered a cartridge since it is a container for contacts (64, 66) that can be connected to a larger mechanism (12) and easily changed. Applicant's claim read on the Shaffer et al. reference in its broadest interpretation.

In response to Applicant's argument that the combination of Shaffer et al. and Stoner does not show a cartridge being a removable component by which working contacts, which co-act with a different connector structure, can quickly be replaced as a group when appropriate, Applicant misinterprets the principle that claims are interpreted in the light of the specification. Although this element is found as examples or

embodiment in the specification, it was not claimed explicitly. Nor were the words that are used in the claims defined in the specification to require this limitation. A reading of the specification provides no evidence to indicate that this limitation must be imported into the claims to give meaning to disputed terms. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, In this case, it is the Examiner's opinion that one with ordinary skill in the art

would modify the cartridge of Shaffer et al. by including the female contact end having an outer diameter that is smaller than an inner diameter of the corresponding body opening in which it is disposed to allow for a lateral movement of the female contact end within the body, each female contact end comprises at least one longitudinal slot along at least a portion of its length to form a split sleeve, such that each female contact end comprises at least two moveable fingers, each female contact end comprises a spring that biases the at least two moveable fingers of each female contact end towards each other, each female contact end comprises a groove that receives a sealing element, such that the sealing element forms a seal between the female contact and the corresponding body opening in which the female contact is disposed as taught in Stoner in order to minimize potential stubbing during the mating of the parts of the connector..

Conclusion

7. **THIS ACTION IS MADE FINAL** necessitated by amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

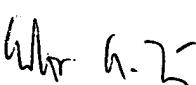
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

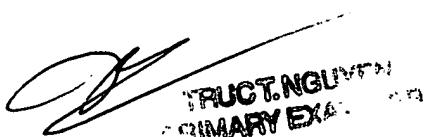
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Edwin A. Leon

AU 2833

EAL
January 17, 2006


DUCT. NGUYEN
PRIMARY EXAMINER